

**Abstract**

The present invention relates to a method for the microbiological isomerization of alpha-hydroxycarboxylic acids using an alpha-hydroxycarboxylic acid racemase, the  
5 enzymes used for this method and microorganisms which express a suitable racemase activity, a screening method for microorganisms with alpha-hydroxycarboxylic acid racemase activity, the nucleic acid sequences encoding this enzyme, expression vectors, recombinant microorganisms which express this racemase, and methods for the production or isolation of a protein with alpha-hydroxycarboxylic acid racemase  
10 activity.